

  
**TURF AND IVY**  
 SOLUTIONS  
*It makes sense.*




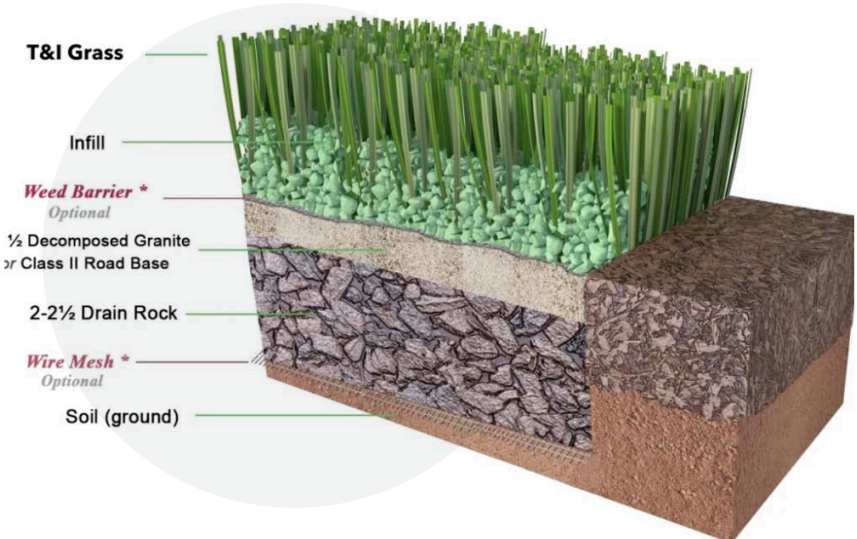
# BLACK PEARL

## USES

- ▶ Playgrounds
- ▶ Parks
- ▶ Soccer Field
- ▶ Football Field
- ▶ General Sports Fields
- ▶ Commercial or Residential
- ▶ Medium-Heavy Traffic

 **15 Year Manufacturer's Warranty**  
**8 Year Manufacturer's High Traffic Warranty**

 **Flo-Rite Drainage Technology**



## **DIAMOND BLADE | S BLADE LITTLE S BLADE | W BLADE**

### SPECIFICATIONS

Pile Height: <b>2"</b>
Turf Gauge: <b>3/8"</b>
Face Weight: <b>65 oz./yd<sup>2</sup></b>
Backing Weight: <b>28 oz./yd<sup>2</sup></b>
Total Weight: <b>93 oz./yd<sup>2</sup></b>
Stitch Rate: <b>10.5/10cm</b>
Stitches/M <sup>2</sup> : <b>11025</b>
Material/Dtex: <b>PE13000 + PP4500</b>
Color: <b>Field Green, Apple Green, Olive Green and Brown Green with Brown and Green Thatching</b>
Type Of Fiber: <b>PE Monofilament and PP Curled As Thatch</b>
Infill Amount: <b>1.0 lb./psf.</b>
Primary Backing: <b>Premium T&amp;I Backing</b>
Tuft Bind: <b>13+ lb/force (ASTM D1335)</b>
Blade Type: <b>Diamond Blade, S Blade, Little S Blade, W Blade</b>
Permeability: <b>91.5 inches/hr. (ASTM F1551)</b>
Melting Point: <b>176 °F (ASTM D2859)</b>
Grab Tear MD: <b>&gt;200 lb./force (ASTM D5034)</b>
Grab Tear CMD: <b>&gt;200 lb./force (ASTM D5034)</b>
Roll Width: <b>15 ft</b>
Roll Length: <b>100 ft</b>
Sq. Ft. Per Roll: <b>1500</b>
Total Roll Weight: <b>1005 lbs</b>



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Claudia Cervantes  
Turf and Ivy Solutions  
5 Centerpointe Drive  
Suite 400  
Lake Oswego, OR 97035  
Generated 1/18/2024 1:47:41 PM

## JOB DESCRIPTION

Lead Testing

## JOB NUMBER

820-11608-1

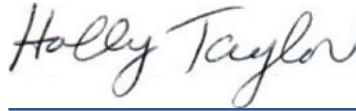
# Eurofins Lubbock

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



Generated  
1/18/2024 1:47:41 PM

Authorized for release by  
Holly Taylor, Project Manager  
[Holly.Taylor@et.eurofinsus.com](mailto:Holly.Taylor@et.eurofinsus.com)  
(806)794-1296



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	3
Definitions/Glossary . . . . .	4
Case Narrative . . . . .	5
Client Sample Results . . . . .	6
QC Sample Results . . . . .	7
QC Association Summary . . . . .	8
Lab Chronicle . . . . .	9
Certification Summary . . . . .	10
Method Summary . . . . .	11
Sample Summary . . . . .	12
Subcontract Data . . . . .	13
Chain of Custody . . . . .	14
Receipt Checklists . . . . .	17

# Definitions/Glossary

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Turf and Ivy Solutions  
Project: Lead Testing

Job ID: 820-11608-1

**Job ID: 820-11608-1**

**Eurofins Lubbock**

## Job Narrative 820-11608-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The sample was received on 1/9/2024 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

### Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Lubbock

# Client Sample Results

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

**Client Sample ID: Black Pearl**

**Lab Sample ID: 820-11608-1**

Date Collected: 01/05/24 15:00

Matrix: Solid

Date Received: 01/09/24 10:00

**Method: SW846 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.622	U	1.96	0.622	mg/Kg		01/17/24 00:12	01/17/24 14:41	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# QC Sample Results

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

## Method: 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 860-140843/1-A**  
**Matrix: Solid**  
**Analysis Batch: 140970**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 140843**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0634	U	0.200	0.0634	mg/Kg		01/17/24 00:12	01/17/24 13:33	1

**Lab Sample ID: LCS 860-140843/2-A**  
**Matrix: Solid**  
**Analysis Batch: 140970**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 140843**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	10.0	10.68		mg/Kg		107	80 - 120

**Lab Sample ID: LCSD 860-140843/3-A**  
**Matrix: Solid**  
**Analysis Batch: 140970**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 140843**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	10.0	10.49		mg/Kg		105	80 - 120	2	20



# QC Association Summary

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

## Metals

### Prep Batch: 140843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-11608-1	Black Pearl	Total/NA	Solid	3051A	
MB 860-140843/1-A	Method Blank	Total/NA	Solid	3051A	
LCS 860-140843/2-A	Lab Control Sample	Total/NA	Solid	3051A	
LCSD 860-140843/3-A	Lab Control Sample Dup	Total/NA	Solid	3051A	

### Analysis Batch: 140970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-11608-1	Black Pearl	Total/NA	Solid	6020B	140843
MB 860-140843/1-A	Method Blank	Total/NA	Solid	6020B	140843
LCS 860-140843/2-A	Lab Control Sample	Total/NA	Solid	6020B	140843
LCSD 860-140843/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	140843

# Lab Chronicle

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

**Client Sample ID: Black Pearl**

**Lab Sample ID: 820-11608-1**

**Date Collected: 01/05/24 15:00**

**Matrix: Solid**

**Date Received: 01/09/24 10:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			.51 g	50 mL	140843	01/17/24 00:12	AGR	EET HOU
Total/NA	Analysis	6020B		10			140970	01/17/24 14:41	DP	EET HOU

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Accreditation/Certification Summary

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

## Laboratory: Eurofins Houston

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-53	06-30-24

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Method Summary

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET HOU
3051A	Preparation, Metals, Microwave Assisted	SW846	EET HOU

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



# Sample Summary

Client: Turf and Ivy Solutions  
Project/Site: Lead Testing

Job ID: 820-11608-1

---

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
820-11608-1	Black Pearl	Solid	01/05/24 15:00	01/09/24 10:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Environment Testing  
Xenco

**CERTIFICATE OF ANALYSIS**

Client: Turf and Ivy Solutions  
Product: Black Pearl  
Eurofins Sample #:820-11608-1  
Lead Results: Less than one part per million

Synthetic fibers from turf product Black Pearl, taken by Turf and Ivy on 1/5/2024, and received by Eurofins Labs, 1/9/2024, were analyzed by Eurofins Labs for total lead by method SW6020B. The results were less than one milligram lead per kilogram synthetic fiber (<1 mg/kg).

**Dr. Blair Leftwich, Director**

**Date**



**Eurofins Lubbock**

6701 Aberdeen Ave. Suite 8  
Lubbock, TX 79424  
Phone: 806-794-1296

**Chain of Custody Record**



Environment Testing

<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab Pk:	Carrier Tracking No(s):	COC No:
Client Contact	Phone:	Taylor	Holly		820-8777-1
Shipping/Receiving	E-Mail:	Holly Taylor@et.eurofins.com	State of Origin:	California	Page 1 of 1
Company:	Accreditations Required (See note):	NEAAP - Texas	Job #:	820-11608-1	Preservation Codes:
Eurofins Environment Testing South Cent	Due Date Requested:	1/15/2024	Analysis Requested	6020B/3051A (MOD) Custom List	A HCl B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O As2O2 P Na2OAS Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Y Trizma Z other (specify)
Address:	4145 Greenbriar Dr	TAT Requested (days):			
City:	Stafford				
State, Zip:	TX 77477				
Phone:	281-240-4200(Tel)	PO #:			
Email:		W/O #:			
Project Name:	Lead Testing	Project #:	82000176		
Site:		SSOW#:			
<b>Sample Identification - Client ID (Lab ID)</b>					
Black Pearl (820-11608-1)	1/9/24	Pacific	Solid	X	Heu309 21 21
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.</p>					
<b>Possible Hazard Identification</b>					
Unconfirmed					
Deliverable Requested: I, II, III, IV Other (specify):					
Primary Deliverable Rank: 2					
Special Instructions/QC Requirements:					
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
<b>Empty Kit Relinquished by</b>					
Relinquished by:	Date/Time:	Date:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Date:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Date:	Company:	Received by:	Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.					
Cooler Temperature(s) °C and Other Remarks:					



**Eurofins Lubbock**  
 6701 Aberdeen Ave, Suite 8  
 Lubbock, TX 79424  
 Phone: 806-794-1296

**Chain of Custody Record**



**eurofins**  
 Environment Testing

<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab P/N:	COC No:																											
Client Contact:		Phone:	Taylor Holly	820-8777 1																											
Shipping/Receiving:		E-Mail:	Holly Taylor@et.eurofins.com	Page: 1 of 1																											
Company: Eurofins Environment Testing South Cent		Accreditations Required (See note): NELAP Texas		Job #: 820-11608-1																											
Address: 4145 Greenbriar Dr		Due Date Requested:	1/15/2024																												
City: Stafford		TAT Requested (days):	Analysis Requested																												
State, Zip: TX, 77477		Project #:	82000176																												
Phone: 281-240-4200(Tel)		WC #:	SSOM#																												
Email:		Project #:	82000176																												
Project Name: Lead Testing		Site:	SSOM#																												
<b>Sample Identification - Client ID (Lab ID)</b>																															
Black Pearl (820-11608-1)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Overhead, B=Bottom, Ash)	Special Instructions/Note:																										
	1/9/24	Pacific	Solid																												
<b>Analysis Requested</b>																															
6020B/3051A (MOD) Custom List																															
<table border="0"> <tr> <td><input type="checkbox"/> HCL</td> <td><input type="checkbox"/> Hexane</td> </tr> <tr> <td><input type="checkbox"/> NaOH</td> <td><input type="checkbox"/> None</td> </tr> <tr> <td><input type="checkbox"/> Zn Acetate</td> <td><input type="checkbox"/> Na2O2</td> </tr> <tr> <td><input type="checkbox"/> Nitric Acid</td> <td><input type="checkbox"/> Na2OAS</td> </tr> <tr> <td><input type="checkbox"/> NaHSO4</td> <td><input type="checkbox"/> Na2SO3</td> </tr> <tr> <td><input type="checkbox"/> MeOH</td> <td><input type="checkbox"/> Na2S2O3</td> </tr> <tr> <td><input type="checkbox"/> AmDil</td> <td><input type="checkbox"/> H2SO4</td> </tr> <tr> <td><input type="checkbox"/> Ascorbic Acid</td> <td><input type="checkbox"/> TSP Dodecahydrate</td> </tr> <tr> <td><input type="checkbox"/> I ke</td> <td><input type="checkbox"/> U Acetone</td> </tr> <tr> <td><input type="checkbox"/> DI Water</td> <td><input type="checkbox"/> V MCA</td> </tr> <tr> <td><input type="checkbox"/> EDTA</td> <td><input type="checkbox"/> W pH-4.5</td> </tr> <tr> <td><input type="checkbox"/> EDA</td> <td><input type="checkbox"/> Y Trizma</td> </tr> <tr> <td><input type="checkbox"/> Other:</td> <td><input type="checkbox"/> Z other (specify)</td> </tr> </table>						<input type="checkbox"/> HCL	<input type="checkbox"/> Hexane	<input type="checkbox"/> NaOH	<input type="checkbox"/> None	<input type="checkbox"/> Zn Acetate	<input type="checkbox"/> Na2O2	<input type="checkbox"/> Nitric Acid	<input type="checkbox"/> Na2OAS	<input type="checkbox"/> NaHSO4	<input type="checkbox"/> Na2SO3	<input type="checkbox"/> MeOH	<input type="checkbox"/> Na2S2O3	<input type="checkbox"/> AmDil	<input type="checkbox"/> H2SO4	<input type="checkbox"/> Ascorbic Acid	<input type="checkbox"/> TSP Dodecahydrate	<input type="checkbox"/> I ke	<input type="checkbox"/> U Acetone	<input type="checkbox"/> DI Water	<input type="checkbox"/> V MCA	<input type="checkbox"/> EDTA	<input type="checkbox"/> W pH-4.5	<input type="checkbox"/> EDA	<input type="checkbox"/> Y Trizma	<input type="checkbox"/> Other:	<input type="checkbox"/> Z other (specify)
<input type="checkbox"/> HCL	<input type="checkbox"/> Hexane																														
<input type="checkbox"/> NaOH	<input type="checkbox"/> None																														
<input type="checkbox"/> Zn Acetate	<input type="checkbox"/> Na2O2																														
<input type="checkbox"/> Nitric Acid	<input type="checkbox"/> Na2OAS																														
<input type="checkbox"/> NaHSO4	<input type="checkbox"/> Na2SO3																														
<input type="checkbox"/> MeOH	<input type="checkbox"/> Na2S2O3																														
<input type="checkbox"/> AmDil	<input type="checkbox"/> H2SO4																														
<input type="checkbox"/> Ascorbic Acid	<input type="checkbox"/> TSP Dodecahydrate																														
<input type="checkbox"/> I ke	<input type="checkbox"/> U Acetone																														
<input type="checkbox"/> DI Water	<input type="checkbox"/> V MCA																														
<input type="checkbox"/> EDTA	<input type="checkbox"/> W pH-4.5																														
<input type="checkbox"/> EDA	<input type="checkbox"/> Y Trizma																														
<input type="checkbox"/> Other:	<input type="checkbox"/> Z other (specify)																														
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months <input type="checkbox"/> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																															
<b>Unconfirmed</b>																															
Deliverable Requested: I, II, III, IV Other (specify)			Primary Deliverable Rank: 2																												
<b>Empty Kit Relinquished by</b>		Date:																													
Relinquished by:	Date/Time:	Received by:	Date/Time:	Company:																											
<i>[Signature]</i>	1/9/24 1708	<i>[Signature]</i>	1/10/2024 10:17	EX																											
Relinquished by:	Date/Time:	Received by:	Date/Time:	Company:																											
		<i>[Signature]</i>																													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.																													

# Login Sample Receipt Checklist

Client: Turf and Ivy Solutions

Job Number: 820-11608-1

**Login Number: 11608**  
**List Number: 1**  
**Creator: Triplett, Colby**

**List Source: Eurofins Lubbock**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	False	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	No date or time on COC or containers.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	N/A	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No date or time on COC or sample containers
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



# Login Sample Receipt Checklist

Client: Turf and Ivy Solutions

Job Number: 820-11608-1

**Login Number: 11608**  
**List Number: 2**  
**Creator: Baker, Jeremiah**

**List Source: Eurofins Houston**  
**List Creation: 01/10/24 02:57 PM**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	





# Limited Product Warranty

(Effective Date: January 1st, 2022)

**Turf and Ivy Solutions, (a.k.a. T&I)** warrants our residential landscape artificial turf with a 15-year limited product warranty. T&I also warrants commercial artificial turf applications and putting green surfaces for eight (8) years. All product warranties are from the date of the artificial turf purchase and assuming the turf is maintained as recommended by T&I. T&I shall not in any event be liable for any indirect, incidental, punitive, special, consequential, or other similar damages including, but not limited to loss of profits or revenue, economic loss, or other goodwill, even if T&I has been notified of the possibility of such damages. Slight color changes will occur over the lifetime of artificial turf and are not considered an issue or basis for a claim. **All labor costs involved with the installation, loss of wages, removal of the affected turf and/or reinstallation of any replacement will be the responsibility of the purchaser.**

## Subject to the following Limitations:

General provisions of this limited warranty apply to the wear of the turf with regard to ultraviolet degradation, and does not apply to damage incurred during installation, improper underlay, pile crushing, willful or negligent abuses, or damage by machinery or equipment, nor does it apply when the turf is not installed by a licensed certified installer. T&I does not warrant a loss of more than 5% per year of the turf material strength due to ultraviolet degradation. The strain rate and deformation rate increase significantly when the material is subjected to extreme heat and will not be warranted in such conditions. T&I holds the right to look at temperature history reports to determine if the material has been exposed to consistent extreme heat over period of 96 hours or more. This limited warranty does not apply to the state of Arizona due to the extreme hot weather conditions. T&I only warrants turf products for a period of 3 years for all products sold and installed in the state of Arizona.

## Warranty Coverage:

In the event of warranty issues covered by this Limited Warranty, T&I will either (a) replace the affected portion of the artificial turf product with a new artificial turf product of the same quality or (b) T&I may elect to issue a credit instead of replacement. This credit shall only apply to the affected areas of the artificial turf product. Replacement of the affected areas is for the artificial turf products only, excluding any and all costs associated with the installation and infill, including but not limited to installation supplies, inconvenience, labor charges, etc. The Expressed Limited Warranty excludes all implied warranties, and T&I shall in no event be liable for a breach of warranty in any amount exceeding the invoice price of the turf. T&I's residential Limited Landscape Artificial Turf Warranty coverage schedule is as follows: Years 1-8 (100%); Years 9-12 (50%); Years 13-15 (25%). T&I's 8 year commercial and putting green artificial turf warranty coverage schedule is as follows: Years 1-4 (100%); Years 5-6 (50%); Years 7-8 (25%).



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



# Limited Product Warranty

(Effective Date: January 1st, 2022)

## Limitations on Coverage:

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, T&I DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY FOR A PARTICULAR PURPOSE.

Furthermore, this Manufacturer's Limited Warranty does not cover the following:

1. Damage from accidents, vandalism, abuse, neglect and improper installation.
2. Acts of God (including earthquakes, floods, hurricanes, vehicular traffic, damage caused by dogs and other natural disasters).
3. Use of chemicals, fire and improper cleaning methods.
4. Failure to properly maintain, protect and/or repair the turf and cleaning of the turf due to calcium build up/dew.
5. Damage that occurs during the shipping/transportation process. All shipping claims must be filed against the freight company in question.
6. Damage caused by reflection/external heat source (melting) or other flammable materials. Such reflection sources include but are not limited to: windows, vinyl fences, metal blocks, concrete/stucco walls, etc.
7. Turf product is subject to normal wear and tear. Normal wear and tear, including matted down or twisted blades is not a manufacturing defect and therefore is not covered by this warranty.
8. Visual lines caused by variation of the color of yarns and manufactured tufted stitch lines are not considered a defect as there is no deterioration of actual yarn itself and is a common occurrence among all tufted products.
9. When a Claim needs to be submitted the following information is required to be sent to [info@turfandivy.com](mailto:info@turfandivy.com) (T&I Sales Order Number, T&I Invoice Number, Pictures, Customer Name, Address and Phone Number)
10. Areas used for high traffic, sport activities, playgrounds and tee lines are not covered in this warranty. Disclaimer: If you are using any Turf and Ivy Solutions products in a high traffic or sport activity application, please refer to the warranty named Turf and Ivy Solutions High Traffic and Sport Activity Turf Warranty.
11. Rolls of artificial turf where the backing of the turf is not covered and exposed to sunlight.

## Limitations on Liability:

The purchaser must promptly inspect all products upon delivery. Should any shortages, defects or non-conformities be discovered during the initial inspection upon delivery of the products, T&I shall take on the obligation of making sure the products are free from such shortages, defects or non-conformities if and only if, the purchaser notifies T&I in writing within 30 days after the date of purchase of said products. This warranty is extended to the original purchaser and is not transferrable. In order to qualify for this warranty, the customer must fill out the T&I Warranty Registration, submit a copy of the registration and a copy of their receipt to the address or email below and receive confirmation of registration via email from T&I.

Turf and Ivy Solutions, Inc. 5 Centerpointe Dr, Ste 400, Lake Oswego, OR, U.S.A. Email: [info@turfandivy.com](mailto:info@turfandivy.com)



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



**turf&ivy**  
solutions

# Limited Product Warranty

(Effective Date: January 1st, 2022)

## REGISTRATION

PURCHASER: \_\_\_\_\_

DATE OF COMPLETION: \_\_\_\_\_

ADDRESS OF INSTALLATION: \_\_\_\_\_

PHONE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

INSTALLER COMPANY: \_\_\_\_\_

INSTALLER ADDRESS: \_\_\_\_\_

INSTALLER PHONE: \_\_\_\_\_

INSTALLER NAME: \_\_\_\_\_

INSTALLATION COMPLETION DATE: \_\_\_\_\_



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



# High Traffic and Sport Activity Turf Warranty

(Effective Date: January 1st, 2022)

**Turf and Ivy Solutions, (a.k.a T&I)** warrants the wear and tear of T&I products with regards to ultraviolet degradation, for high traffic and sport activity provided herein or for any other uses for which T&I provides its written authorization, within eight (8) years from the date of completion of installation (as indicated in this warranty). In the event of warranty issues covered by this Limited Warranty, T&I will either (a) replace the affected portion of the artificial turf product with a new artificial turf product of the same quality or (b) T&I may elect to issue a credit instead of replacement. This credit shall only apply to the affected areas of the artificial turf product. Replacement of the affected areas is for the artificial turf products only, excluding any and all costs associated with the installation and infill, including but not limited to installation supplies, inconvenience, labor charges, etc. The Expressed Limited Warranty excludes all implied warranties, and T&I shall in no event be liable for a breach of warranty in any amount exceeding the invoice price of the turf. T&I's 8-year high traffic and sport activity artificial turf warranty coverage schedule is as follows: Years 1-4 (100%); Years 5-6 (50%); Years 7-8 (25%).

T&I warrants all materials installed meets the T&I specifications and warrants the replacement material will be available through the remainder of the warranty period. This warranty shall commence upon the date of installation completion as indicated in this warranty. The accompanying warranty service will not come into effect unless the Certificate of Completion is sent in for validation to the corporate office indicated herein within thirty (30) days of the date of completion or the purchaser's first use, whichever occurs first. In all cases, the warranty shall be deemed to commence upon the date of completion indicated in this warranty. The customer must provide T&I with their maintenance program within thirty (30) days of completion of installation. This warranty is limited to the remedies of replacement under this warranty; all other recourse which might be available are hereby waived by the purchaser.

## Limitations on Coverage:

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, T&I DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY FOR A PARTICULAR PURPOSE.

Furthermore, this Manufacturer's Limited Warranty does not cover the following:

1. Damage resulting from an accident, misuse, force majeure, unintentional and intentional abuse, infill displacement, neglect or other than normal play and ordinary use of T&I products. For purposes of this warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the activities provided herein; normal play and ordinary use also includes a reasonable number of participants or users, but does not include repetitive training, repetitive marching or high-intensity drills on the same part of the turf, especially in the areas of, but not limited to, base areas, base paths, pitcher's mound, home plate, goal areas, soccer penalty mark/spot areas, sideline areas, tee line, and lacrosse crease areas, all areas will need frequent maintenance and possible replacement.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



# High Traffic and Sport Activity Turf Warranty

(Effective Date: January 1st, 2022)

2. Damage resulting from maintenance, repair, attempted repair by anyone other than a licensed certified installer or an authorized T&I distributor.
3. Damages caused by, but not limited to, the application of cleaning agents, chemicals, adhesive backing, traffic, dirt, negligence, accidents, vandalism, fire, animals, windstorm, improper care, abuse, neglect and improper installation, and Acts of God (including earthquakes, floods, hurricanes, vehicular traffic, fire, improper cleaning chemicals, damage caused by dogs and other natural disasters).
4. Damage resulting from the use of improper footwear such as regular and repeated use of steel cleats, long-spiked track shoes, and flat-soled shoes. Standard football and soccer cleats are recommended.
5. Failure to properly maintain, protect and/or repair the turf and cleaning of the turf due to calcium build up/dew.
6. Damage that occurs during the shipping/transportation process. All shipping claims must be filed against the freight company in question.
7. Damage caused by reflection/external heat source (melting) or other flammable materials. Such reflection sources include but are not limited to: windows, vinyl fences, metal blocks, concrete/stucco walls, etc.
8. Turf product is subject to normal wear and tear. Normal wear and tear, including matted down or twisted blades is not a manufacturing defect and therefore is not covered by this warranty.
9. Visual lines caused by yarn color variation and manufactured tufted stitch lines are not considered a defect as there is no deterioration of actual yarn itself and is a common occurrence among all tufted products.
10. Rolls of artificial turf where the backing of the turf is not covered and exposed to sunlight.
11. T&I does not warrant a loss of more than 5% per year of the turf material strength due to ultraviolet degradation. The strain rate and deformation rate increase significantly when the material is subjected to extreme heat and will not be warranted in such conditions. T&I holds the right to look at temperature history reports to determine if the material has been exposed to consistent extreme heat over a period of 96 hours or more. This limited warranty does not apply to the state of Arizona due to the extreme hot weather conditions. T&I only warrants turf products for a period of 3 years for all products sold and installed in the state of Arizona.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)





# High Traffic and Sport Activity Turf Warranty

(Effective Date: January 1st, 2022)

**When a Claim needs to be submitted, the following information is required to be sent to [info@turfandivy.com](mailto:info@turfandivy.com) (T&I Sales Order Number, T&I Invoice Number, Pictures, Customer Name, Address and Phone Number).**

All synthetic turf is subject to normal wear and tear, which is not a manufacturing defect and is not covered in this warranty. In addition to the other factors applicable in this warranty, wear and tear is based on, without limitation, the construction of synthetic turf (stitch rate, fiber face weight, fiber gauge and pile height, infill components and the maintenance of the turf) and the amount of time and intensity of use of the synthetic turf. All T&I products will be stable to fading in the light with the maximum fade of the T&I products through the warranty period not exceeding fifteen percent (15%) of color loss per year based upon an acceptable grey scale. This warranty does not cover the slight gradations and variations of color within the T&I products and/or face distortion.

T&I disclaims all liability for consequential and incidental damages for breach of any implied or express warranty, including any implied warranty of merchantability, with respect to T&I products. In the event that the T&I product is used for purposes other than high traffic and sport activities provided in this warranty or any other uses for which T&I gives it's written authorization, it will be understood that T&I has tested the product for use in connection with these high traffic and sport activities and may not have tested it for other uses. T&I shall not be responsible for any and all damages incurred, therefore the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void.

## **Limitations on Liability:**

The purchaser must promptly inspect all products upon delivery. Should any shortages, defects or non-conformities be discovered during the initial inspection upon delivery of the products, T&I shall take on the obligation of making sure the products are free from such shortages, defects or non-conformities if and only if, the purchaser notifies T&I in writing within 30 days after the date of purchase of said products. This warranty is extended to the original purchaser and is not transferrable.

In order to qualify for this warranty, the customer must fill out the T&I Warranty Registration, submit a copy of the registration and a copy of their receipt to the address or email below and receive confirmation via email from T&I.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



**turf&ivy**  
solutions

# High Traffic and Sport Activity Turf Warranty

(Effective Date: January 1st, 2022)

## REGISTRATION

PURCHASER: \_\_\_\_\_

DATE OF COMPLETION: \_\_\_\_\_

ADDRESS OF INSTALLATION: \_\_\_\_\_

PHONE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

INSTALLER COMPANY: \_\_\_\_\_

INSTALLER ADDRESS: \_\_\_\_\_

INSTALLER PHONE: \_\_\_\_\_

INSTALLER NAME: \_\_\_\_\_

INSTALLATION COMPLETION DATE: \_\_\_\_\_



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



**turf & ivy**  
solutions

# MANUFACTURING MATERIAL SAFETY DATA SHEET

## A. Identity

Chemical name: Polyethylene fibers with polyurethane backing  
Manufacturer:

Turf and Ivy Solutions, Inc.  
5 Centerpointe Dr Ste 400  
Lake Oswego, OR 97035

Emergency telephone number: 1-888-453-5979

## B. Hazardous Ingredients

This product is considered to be a non-hazardous chemical under the Federal Occupational Safety and Health Administration Hazard Communication Standard 29CFR1910.1200

## C. Physical Data

Boiling Point: n/a  
Vapor Pressure: n/a  
Vapor Density: n/a  
Melting Point: 1760 F/800C (turf fibers)  
Specific Gravity: (H<sub>2</sub>O=1) 0.94 turf  
Percent volatile by volume: n/a  
Evaporation Rate: n/a/  
Appearances: Solid  
Odor: None

## D. Fire Hazard Data

Unusual fire and explosion hazards: None  
Flashpoint: 6050F/318oC  
Extinguishing Method: Water, Foam, Carbon Dioxide  
Fire Fighting Equipment: Wear protective pressure, Self-contained, Breathing Apparatus  
This product is resistant to damage and spreading of ignition in typical exposures such as lighted cigarette dropped on the surface.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



**turf & ivy**  
solutions

# MANUFACTURING MATERIAL SAFETY DATA SHEET

## E. Reactivity Data

Stability: (Conditions to avoid) Polymer may decompose under fire conditions to give off hazardous products

Dissolution: Softening or discoloration may occur with yarn, phenol, formic acid, other acidic exposures below pH5

Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Traces of Hydrogen Cyanide

Hazardous Polymerization: Will not occur

## F. Health Hazard Information

No health hazards are evident from MSDS documentation of constituents of this product, in the form presented when installed and used for its intended application as a synthetic turf product.

## G. Environmental & Disposal Information

This product is in compliance with EPA guidelines (RCRA, CFR261, and TCLP) and is compliant with Executive Order 13101, "Greening the government through waste prevention, recycling, and federal acquisition."

Disposal Procedures: Safe for landfills; Can be processed and used as a combustible fuel where proper recycling facilities are available.

## H. Legal Disclaimer

While the information set forth herein is believed to be accurate and complete as of the date hereof, Turf and Ivy Solutions, Inc. makes no warranty with respect thereto and disclaims all liability from release thereon.

## I. Date of Issue

September 30, 2010



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)



# turf & ivy

solutions

## HOW TO INSTALL ARTIFICIAL GRASS

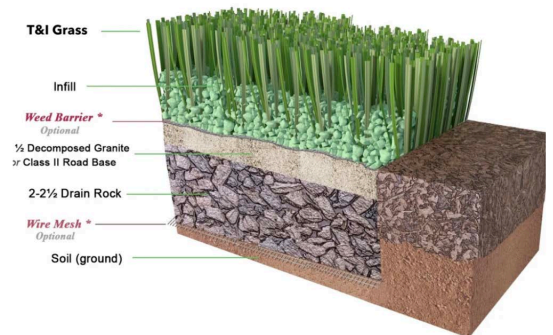
### Artificial Lawn - Site Base Preparation

1. Remove 3 - 4 inches of existing grass sod and dirt. Use a sod cutter for large lawns. Cap and remove all sprinklers and sprinkler heads. Be sure to set a rough grade for drainage.
2. Lay 2 - 2 1/2 inches of drain crushed rock, hose down, then using a vibrating plate compactor, compact to 90%.
3. Lay 1 - 1 1/2 inches of either class II road base or decomposed granite.
4. Lay the weed barrier \* fabric over road base or decomposed granite. This step is optional. Landscape fabrics have their pros and cons. If the soil beneath your installation is "alive" and weeds are wildly grown before installation, it might be a good idea to protect your lawn from weeds with weed barrier fabric. In many cases, there is no big need for weed protection, and you can install turf right on top of decomposed granite without adding extra layers.
5. Hose down and then use a vibrating plate compactor to compact to 90%.
6. Make sure base surface is as leveled and as smooth as possible.
7. Create a slight grade for optimal drainage.

### Synthetic Turf Installation

**CAUTION:** Turf should be rolled out under the sun with blades facing down at least 1-2 hours before installation. This will allow the turf to acclimate and, as a result, make it easier to work with.

1. Lay turf onto base and position where needed. Using a carpet knife/razor knife, cut off the excess grass turf on the backside (3 stitches in from sides). Cut fake turf (on the backside) to fit the area.
  2. Fasten one end with 40D or 60D Bright Common nails of 5-6 inches in length, spaced 3-4 inches apart along the edges. Stretch turf and fasten with nails as you move across to the opposite end. Place a nail every 12-24 inches throughout the center and every 3-4 inches along the perimeter.
  3. Fasten together seams by using 11 gauge 6"x1"x6" staples spaced 4 inches apart along the seam. Do not countersink staples. Note: Be sure the seams are taut and precise, the grain of the turf is facing in the same direction, and the space at the seam is the same as the stitching gauge.
  4. After turf is installed, power broom before applying infill, apply infill onto turf grass using a drop spreader. Spread infill as evenly as possible with a grading rake or broom until infill settles into the base of the turf. You can use a push broom for quick and easy infilling.
- Note:** Never use regular sand for infill. For putting green installation, use infill with a smaller grain, for example, silica sand #30, because the smaller grain size will work it into the surface better since the golf greens are dense.
5. Hand or power broom again so that the blades are standing straight up. Use carpet scissors to trim off the excessive turf blades. Clean the surrounding area with a blower or a broom.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

turfandivy.com



**turf&ivy**  
solutions

## **CARE AND MAINTENANCE GUIDE**

Our turf is virtually maintenance free. General up keep for synthetic turf includes raking, blowing and occasionally rinsing. You do not have to re-fill the infill. General maintenance will not harm the infill.

From time to time you will want to rake the turf to make sure the needles stand straight up. Heavy furniture or lots of daily use can cause the needles to look less firm over time. You can use a blower to blow off any leaves or dust. A garden hose can also be used to rinse of any stubborn dust.

Cleaning up after your pets is easy with synthetic turf, simply scoop up any large mess and then rise with water. The sun is a natural disinfectant, however if you are looking for something stronger try a bio degradable, smell inhibiting disinfectant. Products like that are readily found at local pet supply stores.

During hot summer months you may want to use a garden hose to cool the turf. Unlike natural grass the synthetic turf does not retain moisture and will feel hot to the touch in extreme degree heat. Most homeowners keep their sprinkler system intact, though they rarely use it. The sprinklers will give the lawn a natural look and provide ease when you need to cool or dust off the lawn.



5 Centerpointe Drive - Suite 400  
Lake Oswego, OR 97035



Office Number:  
1.888.453.5979

[turfandivy.com](http://turfandivy.com)